III.B.2.N.a.26. PRUNUS VIRGINIANA SHRUBLAND ALLIANCE

Choke Cherry Shrubland Alliance

PRUNUS VIRGINIANA - (PRUNUS AMERICANA) SHRUBLAND

Choke Cherry - (American Plum) Shrubland

ELEMENT CONCEPT

GLOBAL SUMMARY: This community has a wide distribution, being reported from states primarily in the northwestern United States, including the northwestern Great Plains, but also in Nevada. In Colorado, this riparian shrubland occurs as small pockets on higher terraces or as narrow bands along the high-water mark of steep banks and incised channels. It can also grow at the base of cliffs adjacent to rivers and streams where it forms impenetrable thickets. Stands have a dense, medium-tall (1.5-2 m) shrub canopy that is almost impossible to walk through. This vegetation is dominated by *Prunus virginiana* and grows at the interface between the riparian areas and the adjacent upland.

At Wind Cave National Park in South Dakota, this type is characterized by moderate to dense shrub cover, typically in the 25-75% range. Shrub cover is generally greater in drainage bottoms and on lowermost slopes, and less on slopes. *Prunus virginiana* may be the dominant shrub species, but often other species are codominant or dominant, especially on slopes, including *Rhus trilobata, Amorpha canescens, Symphoricarpos occidentalis*, and *Toxicodendron pubescens*. Stands dominated by *Prunus americana* may be a variant of this type. In drainage bottom situations, herbaceous cover is usually sparse, less than 10%. On slopes, the shrubs typically occur in some grassland type, and graminoid cover can be greater than 75%.

ENVIRONMENTAL DESCRIPTION

USFWS Wetland System: Upland

Florissant Fossil Beds NM Environment: This shrubland is unusual and is known for only one site within the monument as a pure stand. At two other sites it is codominant or subdominant to *Ribes cereum*. For all stands, however, outcrops of rhyolite in the form of plate-like rubble provide the substrate. These outcrops appear more moist than the adjacent gravels derived from eroding Pikes Peak granite and are steep (28% slope) with rapid drainage.

Global Environment: This association grows at the interface between the riparian areas and the adjacent upland. Stands usually occur as small pockets on higher terraces or as narrow bands along the high water mark of steep banks and incised channels. It can also grow at the base of cliffs adjacent to rivers and streams where it forms impenetrable thickets (CONHP pers. comm. 1998). In southwestern South Dakota, stands are found in a variety of habitats. Slope varies from flat to very steep, with variable aspect. Stands are commonly found in the bottoms of draws and drainages. This type also occurs associated with rock outcrops (H. Marriott pers. comm. 1999, Von Loh et al. 1999).

VEGETATION DESCRIPTION

Florissant Fossil Beds NM Vegetation: The rhyolite outcrops and thus the stands of this shrubland are small, covering only 100–200 m^2. The individual shrubs are relatively short, averaging from 1–2 m in height. Within these small chokecherry stands, foliar cover of *Prunus virginiana* is approximately 40% in the densest stand to as little as 5% in a stand codominated by *Ribes cereum*. All stands averaged approximately 55% foliar cover, with approximately 45–50% of this cover provided by shrubs, e.g., *Prunus virginiana, Ribes cereum, Dasiphora fruticosa*, and *Rubus deliciosus*. Common grass species within the stands were *Bouteloua gracilis* and *Muhlenbergia montana* (with foliar cover values from 5–10%), and the common forbs included *Grindelia subalpina, Galium boreale*, and *Allium cernuum* (with foliar cover values less than 5%). Ground cover in these small stands was predominantly large rocks (65–95% cover) and litter (15–30% cover). The large rocks were flat plates of rhyolite, a volcanic rock rarely outcropping in the area.

These small stands appear as light spots with pebbly dots on true color aerial photographs. They are below the minimum mapping unit; however, they are unique for the monument.

Global Vegetation: In Colorado, this community type is a medium-height (1.5-2 m) shrubland with dense vegetation that is almost impossible to walk through (CONHP pers. comm. 1998). In southwestern South Dakota, this type is characterized by moderate to dense shrub cover, typically in the 25-75% range. Shrub cover is generally greater in drainage bottoms and on lowermost slopes, and less on slopes. *Prunus virginiana* may be the dominant shrub species, but often other species are codominant or dominant, especially on slopes, including *Prunus americana, Rhus trilobata, Amorpha canescens, Symphoricarpos occidentalis* and *Toxicodendron pubescens*. In drainage bottom situations, herbaceous cover is usually sparse, less than 10%. On slopes, the shrubs typically occur in some grassland type, and graminoid cover can be greater than 75%.

Global Dynamics: Some stands on slopes are the result of recent fire that killed the overlying canopy, converting *Pinus ponderosa / Prunus virginiana* Forest (CEGL000192) to this *Prunus virginiana* shrubland type.

MOST ABUNDANT SPECIES

Florissant Fossil Beds NM

Stratum	Species
Shrub	*Prunus virginiana, Dasiphora fruticosa, Ribes cereum*
Graminoid	*Bouteloua gracilis, Muhlenbergia montana*

Global

Stratum	Species
Short Shrub	*Prunus virginiana*

CHARACTERISTIC SPECIES

Florissant Fossil Beds NM

Stratum	Species
Shrub	*Prunus virginiana, Ribes cereum*
Graminoid	*Bouteloua gracilis, Muhlenbergia montana*

Global

Stratum	Species
Short Shrub	*Prunus virginiana*

OTHER NOTEWORTHY SPECIES

Florissant Fossil Beds NM

Global

Stratum	Species
Short Shrub	*Prunus americana, Symphoricarpos occidentalis*
Graminoid	*Pascopyrum smithii, Poa pratensis*

GLOBAL SIMILAR ASSOCIATIONS:
Fraxinus pennsylvanica - Ulmus americana / Prunus virginiana Woodland (CEGL000643)

SYNONYMY:
- DRISCOLL FORMATION CODE:III.B.3.a. (Driscoll et al. 1984) B
- *Prunus virginiana* (Bourgeron and Engelking 1994) =
- *Prunus virginiana* community type (Hansen et al. 1995) =
- *Prunus virginiana* Dominance Type (Jones and Walford 1995) =
- *Prunus virginiana / Rosa woodsii* community type (Manning and Padgett 1995) F

GLOBAL STATUS AND CLASSIFICATION COMMENTS

Global Conservation Status Rank: G4Q.
Global Classification Comments: The *Prunus virginiana / Rosa woodsii* (common chokecherry / wild rose) community type (Manning and Padgett 1995) is closely related but does not include any *Symphoricarpos occidentalis*.

ELEMENT DISTRIBUTION

Florissant Fossil Beds NM Range: *Prunus virginiana* dominated one stand on a west-facing slope of Grape Creek southeast of the maintenance shop. This stand and two small south- and west-facing stands west of the Hornbek Homestead, where *Prunus virginiana* is codominant with *Ribes cereum*, occupy steep slopes of plate-like rhyolite outcrops.

Global Range: This shrubland is found primarily in the northern Great Plains and northwestern Rocky Mountain regions of the United States, but may extend into the Great Basin.

Nations: US
States/Provinces: CO ID MT NV? OR SD WA WY

ELEMENT SOURCES

Florissant Fossil Beds NM Inventory Notes: Plot 44
Classification Confidence: 2 **Identifier:** CEGL001108
REFERENCES: Bourgeron and Engelking 1994, Caicco and Wellner 1983n, Copeland 1980a, Driscoll et al. 1984, Evans 1989a, Hansen et al. 1991, Hansen et al. 1995, Jones and Walford 1995, Kittel et al. 1996, Kittel et al. 1999, Manning and Padgett 1995, Von Loh et al. 1999